REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-19 are pending in the present application. Claims 3, 9 and 14 are amended and claims 15-19 are added by the present amendment.

In the outstanding Office Action, claims 7-12 and 14 were rejected under 35 U.S.C. § 102(b) as unpatentable over Hennick; claims 1-6 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hennick; and claims 1-5, 7-11, 13 and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over Griffin, Schwinn and Erisman.

Initially, it is noted that claims 3, 9 and 14 are amended to correct minor informalities. It is believed no new matter is added.

Claims 7-12 and 14 were rejected under 35 U.S.C. § 102(b) as unpatentable over Hennick. This rejection is respectfully traversed.

Independent claims 7 and 14 are directed to "A motor controller for performing control of position or velocity of a movable member mechanically connected with a motor..." In contrast, Hennick merely discusses an "analyzing device" that "measures the change or non-linearity in the velocity of a system under test..." Accordingly, it is respectfully requested this rejection be withdrawn because the "analyzing device" of Hennick does not teach or suggest at least "performing control," as in the independent claims.

In particular, Item 1 of the outstanding Office Action asserts "the start/stop operation of the motor 2 by the signal processor 6 is a motor controller." However, it is respectfully submitted that assertion is erroneous. Rather than a "motor controller," Hennick describes at column 2, lines 52-58 that a signal processor 6 *only responds* to a start signal. Accordingly, independent claims 7 and 14 and each of the claims depending therefrom patentably distinguish over Hennick.

Claims 1-6 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hennick. This rejection is also respectfully traversed.

Independent claims 1 and 13 include similar features as claims 7 and 14, which as discussed are believed to patentably distinguish over Hennick. Moreover, none of the recitation in the outstanding Office Action teaches or suggests the features of the independent claims. Accordingly, it is respectfully requested this rejection also be withdrawn for at least similar reasons as discussed for claims 7-12 and 14.

Claims 1-5, 7-11, 13 and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over Griffin, Schwinn and Erisman. This rejection is also respectfully traversed at least because a *prima facie* case of obviousness has not been established.

MPEP §2142 sets forth three criteria to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the applied reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also MPEP section 2142 (Establishing a *prima facie* case of obviousness). It is respectfully submitted that a *prima facie* case of obviousness has not been established since none of the three prongs of the test for obviousness have been met.

First, Griffin only discusses an "electrically powered bicycle" in which "Power from storage batteries 80 to motor 60 is controlled in an 'on' and 'off' driving relationship by means of a conventional electrically operable control switch 90..." in which the switch is operable only by a rider. Further, Griffin recites at column 1, lines 27-30 that the "primary object...to provide an electrically powered bicycle which is simple in construction..."

Schwinn merely describes a computer that passively measures values related to a bicycle operator such as speed, distance traveled and time (see pages 2 and 4 of Schwinn). The system of Schwinn does not include features of connecting to a motor or controlling a motor, and only relates to monitoring of a bicycle. Similarly, Erisman also only discusses "A solid state bolt-on bicycle accessory" that "indicates vehicle speed and drive sprocket RPM."

Accordingly, even if Griffin, Schwinn and Erisman were combined in the manner proposed in the outstanding Office Action, such combination would not teach or suggest at least "a motor controller for performing control of position or velocity of a movable member connected with a motor using analog feedback signals from encoders..." as in the independent claims. Therefore, a combination of Griffin, Schwinn and Erisman would not teach or suggest all the features of the pending claims.

Also, even if Griffin, Schwinn and Erisman were combined as proposed in the outstanding Office Action, such a combination would not provide an operable system because Griffin only discusses a switch operated by a rider of a bicycle, and neither Schwinn nor Erisman

teach or suggest providing a control system for controlling a motor. Accordingly, the requirement of a *prima facie* case of obviousness that there be a reasonable expectation of success is not met.

Moreover, no motivation is provided in Griffin, Schwinn and Erisman to combine those references. To the contrary, Schwinn teaches away from such a combination in that Schwinn only describes passive monitoring of a bicycle; Erisman similarly teaches away from such a combination in that the "bolt on bicycle accessory" of Erisman is meant to be detachable from a bicycle, which type of system is unsuitable for controlling a motor as proposed in the outstanding Office Action.

Accordingly, for at least the above-discussed reasons a *prima facie* case of obviousness has not been made, and it is respectfully requested this rejection be withdrawn.

Moreover, the pending claims further patentably distinguish over Hennick, Griffin, Schwinn and Erisman at least because independent claim 1 is directed to a motor controller including a motor controller that performs A/D conversion, and automatically determines and displays "information on at least one of amplitudes, offsets and a phase difference of the analog feedback signals" from encoders of a motor. Independent claims 7, 13 and 14 include similar features.

In a non-limiting example, Figure 1 shows "The detecting circuit 25 performs A/D conversion of the analog feedback signal from the encoder 6 and a compensation using amplitude ratio and phase difference compensation parameters, to feed back the compensated signal to the position control section 21 as a position feedback digital signal" (see the specification at page 3, lines 27-31).

In contrast, Hennick, Griffin, Schwinn and Erisman merely discuss systems in which direct measurement of a physical value is performed. Further, Hennick only discusses obtaining a difference between a counted value of a velocity signal from a linear encoder 4 and a counted value of a reference frequency signal by a digital subtractor 12, which is displayed on a digital display 17 and then D/A converted by a D/A converter 20 to be recorded by a recorder 22.

None of Hennick, Griffin, Schwinn and Erisman teach or suggest use of "analog feedback signals" used in a feedback motor control system, as in the pending independent claims. Accordingly, it is respectfully submitted the independent claims and each of the claims depending therefrom even further patentably distinguish over the applied art.

Further, new claims 15-19 are added to set forth the invention in a varying scope. New claim 15 is similar to claim 14 but includes features of obtaining a value of an offset value ΔA, support for which is found in the originally filed specification at least in Figures 2 and 6 and at page 6, line 38 to page 7, line 15; new claim 16 is also similar to claim 14 but includes features of feeding back a compensated signal based on offsets of analog feedback signals to control position or velocity of a motor, support for which is found in the specification at least in Figures 1 and 2 and at page 3, lines 23-31; new claims 17 and 18 are method claims which include similar features as new claims 15 and 16; and new claim 19 includes similar features as independent claim 1. New claims 15-19 are believed to be allowable at least for similar reasons as claims 1 and 14.

Consequently, in light of the above discussion and in view of the present amendment, this application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 1/6/4

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